## CLAIMS

1. An optical disc drive capable of recording and playing back different kinds of optical discs, comprising a pickup for irradiating the optical disc with leaser beam, laser control means for controlling the irradiation of the leaser beam, actuator driving means for moving an objective lens which constitutes said pickup in a focus direction, focus detection photoreceiving means for detecting a focus state by means of light reflected from said optical disc, FE signal measuring means for measuring an amplitude of a focus error signal which is generated by said focus detection photoreceiving means, and optical disc discriminating means for discriminating said optical disc from the amplitude measured by said FE signal measuring means, wherein said actuator driving means brings said objective lens close to the optical disc, focus error signals are generated in front of and behind a position where the leaser beam comes into focus on a signal surface of the optical disc, said optical disc discriminating means discriminates a thickness of the optical disc from a difference in waveform of the focus error signal which is generated by focus deviation between leaser beam which passes through an outer periphery of said objective lens and leaser beam which passes through an inner periphery of said objective lens, and discriminates a kind of said optical disc from the thickness of said optical disc.

2. The optical disc drive according to claim 1, wherein when a maximum value of the amplitude of said focus error signal is defined as FEmax and a minimum value of the amplitude of said

focus error signal is defined as FEmin, an absolute value of the FEmax and an absolute value of the FEmin are compared with each other, thereby discriminating the thickness of the optical disc.

3. The optical disc drive according to claim 1, wherein when a maximum value of the amplitude of said focus error signal is defined as FEmax and a minimum value of the amplitude of said focus error signal is defined as FEmin, the thickness of said optical disc is discriminated by means of a value (FEmax+FEmin)/(FEmax-FEmin).

4. The optical disc drive according to claim 1, wherein when a maximum value of the amplitude of said focus error signal is defined as FEmax and a minimum value of the amplitude of said focus error signal is defined as FEmin, a difference between an absolute value of the FEmax and an absolute value of the FEmin is obtained, and this difference is compared with a predetermined discrimination value, thereby discriminating the thickness of said optical disc.

5. An optical disc drive capable of recording and playing back different kinds of optical discs, comprising a pickup for irradiating the optical disc with leaser beam, laser control means for controlling the irradiation of the leaser beam, actuator driving means for moving an objective lens which constitutes said pickup in a focus direction, focus detection photoreceiving means for detecting a focus state by means of light reflected from said optical disc, FE signal measuring means for measuring

an amplitude of a focus error signal which is generated by said focus detection photoreceiving means, and optical disc discriminating means for discriminating said optical disc from the amplitude measured by said FE signal measuring means, wherein said actuator driving means brings said objective lens close to the optical disc, focus error signals are generated in front of and behind a position where the leaser beam comes into focus on a signal surface of the optical disc, said optical disc discriminating means discriminates a thickness of the optical disc from a symmetry between a positive waveform and a negative waveform of an amplitude of the focus error signal which is generated by focus deviation between leaser beam which passes through an outer periphery of said objective lens and leaser beam which passes through an inner periphery of said objective lens, and discriminates a kind of said optical disc from the thickness of said optical disc.

6. An optical disc discriminating method for discriminating a kind of an optical disc, comprising a driving step for bringing an objective lens close to the optical disc while irradiating the optical disc with leaser beam, an FE signal measuring step for measuring an amplitude of a focus error signal during said driving step and for storing a maximum value FEmax and a minimum value FEmin of said focus error signal, and a discriminating step for comparing a difference between an absolute value of the maximum value FEmax and an absolute value of the minimum value FEmin which are stored in said FE signal measuring step with a previously stored discrimination value, wherein the kind of the optical disc is discriminated in said discriminating step.

7. The optical disc discriminating method according to claim 6, wherein in said discriminating step, (FEmax+FEmin)/(FEmax-FEmin) is calculated, said calculated (FEmax+FEmin)/(FEmax-FEmin) is compared with the previously stored discrimination value, thereby discriminating the kind of the optical disc.

8. The optical disc discriminating method according to claim 6 or claim 7, wherein a value obtained by calculating the maximum value FEmax and the minimum value FEmin based on the focus error signal at a position where said leaser beam comes into focus is used as said discrimination value.

9. The optical disc drive according to any one of claims 1 to 5, wherein the optical disc drive uses a pickup in which a focus deviation is generated between leaser beam which passes through an outer periphery of said objective lens and leaser beam which passes through an inner periphery of said objective lens by a difference in base material thickness of optical disc.